

raised above the forehead from between the eyes. Teeth extraordinarily heavy, really enormous! Premaxillæ entire; mesial suture not complete in this young specimen, but completely ossified, enclosing two palatal foramina. First upper premolar very small, triangular, with sharp cusp inclined inwards, rather crushed between canines and second premolar. Upper incisors parallel. Lower incisors 4. Lower canines close together at their bases.

Senaar.

It seems unaccountable how Dobson could have referred this actual specimen to the Southern European form, but such is the fact.

The following species I have not seen:—

*Dysopes ventralis*, Heuglin = *Nyctinomus Cestoni*, Dobs. (partim).

(This is probably *N. midas*, Sundev.)

*Dysopes bivittatus*, Heugl. = *N. bivittatus*, Dobs. Cat. B. M. p. 426.

(From Heuglin's description this form would appear to be very nearly allied to *N. angolensis*, as are also *D. hepaticus*, Heugl., and *D. talpinus*, Heugl.)

*Nyctinomus Bemmeleni*, Jentink, Notes Leyd. Mus. i. 1879, p. 121.

*Nyctinomus Anchieta* and *brunneus*, Seabra, Journ. Sci. Math. 2 ser. t. vi. no. xxii.

(May possibly be the same as the S. African bat referred above to *N. ægyptiacus*.)

*Nyctinomus Bocagei*, Seabra, loc. cit.

VI.—On an undescribed Species of Hedgehog from Southern Arabia. By Dr. JOHN ANDERSON, F.R.S., and W. E. DE WINTON.

*Erinaceus dorsalis*, sp. n.

Hair soft and silky. Spines with from twenty-five to twenty-eight longitudinal ridges with well-marked nodosities.

Bare area on the centre of the head well developed, beginning slightly anterior to the front border of the ears and prolonged backwards to the nape, tapered gradually from its base to its apex. The spines do not extend in advance of the anterior border of the ears.

Head rather short and broad. Ears very large and rounded, their height from lower border of external meatus to tip equalling in adults the length from the external meatus to the snout.

In some individuals not quite adult the ears are somewhat shorter. Limbs strong and moderately long; fore feet broad, hind feet narrower, claws strong. The palmar surface of the fore feet with a single broad pad, occasionally divided in two or nearly so, and when so divided the outer division is the larger. Two much smaller, nearly equal-sized plantar pads on the hind feet placed side by side, and in some specimens more or less obliquely, with granular eminences between them and the digital pads.

The spines in a broad area along the back have their tips nearly black, and in some individuals the tips of these spines are wholly black, whereas, in all, the spines on the sides have broad white tips; so that this hedgehog is distinguished by a broad black dorsal stripe with white sides.

The whole of the face to beyond the eyes, the front of the forehead, and a stripe behind the angle of the mouth to below the ears, the chin, the back of the ears, a broad area of the internal borders, more especially the lower half of the inner border, black or blackish brown. Sides of the body below the spines, the limbs, tail, and around the genitalia likewise blackish brown. The throat, chest, and upper part of belly mixed white and brown in blotches. The insides of the ears, the sides of the neck below the ears, and the area between the ears and the eyes white.

The above description is taken from an adult male in alcohol from the Hadramaut, collected by the Bent Expedition, which is taken as the type of the species, and from which the skull has not yet been extracted.

In some individuals black prevails over all the parts, only a few greyish hairs being present on the forehead and front of the ears, below the ears and on the throat, but the white centre of the ears is present in all. In others, only the face, the fore limb from the elbow downwards, the hind limb, genitalia and the area around them, and the tail are black, the other parts being pure white, while in some brown hairs appear here and there on the white of the underparts.

Out of the ten specimens, only three may be said to be black throughout, but even in them a little white may be detected in places; two are males, but the sex of the other is unknown. In all the others a great deal of white is present on the neck, chest, and upper abdomen.

From the foregoing it will be seen that while the majority of specimens of this hedgehog are little darker in the fur than their near ally *E. aethiopicus*, some individuals in the almost uniform blackness of the furred parts resemble the widely distinct species from the neighbouring country, *E. macrocanthus*. The dark dorsal area on the spines with light sides will, however, always serve as a distinguishing mark of this new species without consulting the skull.

The skull of *E. dorsalis* in its general form resembles that of *E. aethiopicus*, having, like that species, the enormously inflated bullæ and pterygoids, but differs from it in having a much broader snout, this part of the skull of *E. aethiopicus* being finely pointed; first upper premolar with two roots, second very small, lying on the outside of the tooth-row and often absent altogether.

In a Tunisian hedgehog (*E. deserti*, Loche) the snout is not quite so narrowly pointed as in Eastern Soudan individuals; but this observation rests on a single specimen which in its other characters is inseparable from the hedgehogs of the Egyptian Soudan, which externally are the same as the Tunisian animals referable to *E. aethiopicus*.

In one skull (no. 201, ♂) the frontal sends forward a well-defined process which articulates with the premaxilla, the posterior extremity of which is pointed. In another skull (125, ♂) a similar process from the frontal exists but of a more slender character. On the *right side* it touches the premaxilla, but not on the *left*. In another (199, ♀) the posterior extremities of the premaxillæ are rather truncated and separated from the frontal by a considerable interval.

The postpalatine foramina of this species are remarkably long and wide as compared with the considerably smaller imperfections of ossification found in *E. aethiopicus*, in which each opening is sometimes, and apparently not infrequently, resolved into two openings by the presence of a transverse ridge of bone.

Measurements taken from specimens in alcohol :—

	♂ (type).	♀.
	mm.	mm.
Snout to vent .....	172	158
Vent to tip of tail .....	26	26
Snout to eye (internal canthus).....	25	24.5
Auditory meatus to snout .....	47	46
Height of ear .....	45	45
Breadth of ear, greatest .....	31	29
Elbow to tip of middle digit .....	69	67
Length of hind foot .....	33	29.5
Pollex (including claw), under surface of web .....	4.5	4
Hallux .....	2.5	2.3

*Note.*—The above joint notice was written previous to the lamented death of Dr. Anderson, with whom I was associated in his work on the Mammals of Egypt, and is now published almost as it was left.—W. E. DE W.

#### VII.—On a new Species of Bat from the Soudan.

By W. E. DE WINTON.

AMONG the mammals collected in the Soudan by Mr. H. F. Witherby in the spring of this year and acquired by the late Dr. John Anderson is a small bat which appears to be new to science. The specimen, preserved as a skin, was obtained at Wad Mariun about 12 miles from Khartoum on the White Nile on May 12th, and will be taken as the type of the species. A second specimen, which has just been put into my hands by the kindness of Mr. O. Thomas of the British Museum, is preserved in alcohol; it was collected by Capt. S. S. Flower, Director of the Zoological Gardens at Cairo, on March 14th, at Abu Zeit on the White Nile some 200 miles south of Khartoum, during his recent trip with the party sent to inspect the Sud-cutting operations.

Although the front of the head is much damaged by shot, this "spirit specimen" is valuable in enabling a fuller description of the animal to be given than would have been possible if the dried skin alone had been available.

I have great pleasure in associating the name of so keen a worker in zoology, who also collected the first specimen, with this fine new species.

Dobson made a subgenus for the African bats allied to the Australian genus *Chalinobus*, but I think it will be much more convenient to look upon these two geographically separated groups as distinct genera; the species from the two